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Two new species, two new synonyms, and new records of *Leptusa* KRAATZ (Coleoptera: Staphylinidae, Aleocharinae)

V. ASSING

Abstract: *Leptusa taurica* sp.n. (Turkey: Kahramanmaraş) and *L. calliceroides* sp.n. (China: N-Yunnan) are described and illustrated. The following synonymies are proposed: *Leptusa asturiensis* EPPELSHEIM = *L. caboallensis* PACE 1983, syn. n.; *Leptusa hummleri* BERNHAUER, 1910 = *L. hummleri advena* PACE, 1981, syn. n. Based on an examination of type material, the previously inferred synonymy of *L. vavrai* ROUBAL, 1931 with *L. cribripennis* KRAATZ, 1856 is confirmed. Additional records of several poorly known species from Palaearctic region especially from Spain, Turkey, and China, are presented. The known distributions of *L. asturiensis* and *L. hummleri* are mapped.

Key words: Coleoptera, Staphylinidae, Aleocharinae, *Leptusa*, Palaearctic region, Spain, Turkey, China, taxonomy, new species, new synonym, distribution.

1. Introduction

Since the last contributions to the Palaearctic representatives of *Leptusa* KRAATZ (ASSING 2002, 2003a, 2004), more material has become available, especially from China, Spain, and Turkey. This material contained not only two remarkable new species from northern Yunnan and from southern Turkey, but also some additional records of recently described species, both from the Western and the Eastern Palaearctic regions. Three additional species, all of them probably undescribed, were seen from Yunnan, but are not treated here, since they are represented only by females.

2. Material and measurements

The material referred to in this study is deposited in the following public institution and private collections:

SNM..... Slovenské Národné Múzeum, Bratislava (via P. Hlaváč)

cAss author's private collection

cRou private collection G. de Rougemont, Londinières

cSch private collection M. Schülke, Berlin

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at suture from the apex of the scutellum to the posterior margin of the elytra.

3. New species and new records

Leptusa (Pachygastropisalia) lativentris pajarensis FAGEL

Material examined: Spain, Galicia: 28 exs., Sierra de Ancares, ESE Degrada, 42°48'53N, 6°53'38W, 1300 m, moist *Ilex* forest with ferns, 10.VII.2004, leg. Assing (cAss); 6 exs., Sierra de Ancares, ESE Degrada, 42°48'55N, 6°53'07W, 1510 m, birch forest with ferns, 11.VII.2004, leg. Assing (cAss); 1 ex., Sierra de Ancares, Tres Obisbos, 42°48'04N, 6°52'08W, 1760 m, peak region, grass, moss, etc., 11.VII.2004, leg. Assing (cAss); 26 exs., Sierra de Ancares, ENE Degrada, 42°50'12N, 6°54'07W, 970 m, mixed deciduous forest with very old *Castanea sativa*, 14.VII.2004, leg. Assing (cAss); 23 exs., Sierra de Ancares, E Degrada, 42°49'52N, 6°54'25W, 1315 m, old mixed forest with *Ilex*, *Betula*, and *Luzula* undergrowth, 16.VII.2004, leg. Assing (cAss).

Comments: The known distribution of this subspecies is mapped by ASSING (2004).

Leptusa (Pisalia) inexpectata FAGEL

Material examined: Spain, Galicia: 1 ex., Sierra de Ancares, ESE Degrada, 42°48'53N, 6°53'38W, 1300 m, moist *Ilex* forest with ferns, 10.VII.2004, leg. Assing (cAss); 3 exs., Sierra de Ancares, ESE Degrada, 42°48'55N, 6°53'07W, 1510 m, birch forest with ferns, 11.VII.2004, leg. Assing (cAss); 9 exs., Sierra do Courel, W Visuña, Formigueiros, 42°36N, 7°07W, 1540 m, montane birch and oak forest with *Luzula* undergrowth, 12.VII.2004, leg. Assing (cAss); 14 exs., Sierra de Ancares, ENE Degrada, 42°50'12N, 6°54'07W, 970 m, mixed deciduous forest with very old *Castanea sativa*, 14.VII.2004, leg. Assing (cAss); 7 exs., Sierra de Ancares, E Degrada, 42°49'52N, 6°54'25W, 1315 m, old mixed forest with *Ilex*, *Betula*, and *Luzula* undergrowth, 16.VII.2004, leg. Assing (cAss). Castilla y León: 3 exs., Sierra de Ancares, 3 km E Piomedo, 42°51'59N, 6°50'27W, 1200 m, N-slope, creek valley, birch and oak with *Luzula* undergrowth, 15.VII.2004, leg. Assing (cAss).

Comments: The species is widespread and rather common in the western Cordillera Cantábrica.

Leptusa (Gnopheropisalia) nigerrima PACE

Material examined: Spain, Galicia: 3♀♀, Lugo, San Miguel, Castroverde, mixed chestnut and oak forest, 9.&24.IV.2003, leg. Valcárcel (cSch, cAss); 1 ex., Sierra do Courel, W Visuña, Formigueiros, 42°36N, 7°07W, 1540 m, montane birch and oak forest with *Luzula* undergrowth, 12.VII.2004, leg. Assing (cAss); 5 exs., Sierra de Ancares, ENE Degrada, 42°50'12N, 6°54'07W, 970 m, mixed deciduous forest with very old *Castanea sativa*, 14.VII.2004, leg. Assing (cAss); 1 ex., Sierra de Ancares, E Degrada, 42°49'52N, 6°54'25W, 1315 m, old mixed forest with *Ilex*, *Betula*, and *Luzula* undergrowth, 16.VII.2004, leg. Assing (cAss).

Comments: The known distribution of this species is mapped by ASSING (2003a).

Leptusa (Entomophallopisalia) franzi PACE

Material examined: Spain, Galicia: 1 ex., Sierra de Ancares, Tres Obisbos, 42°48'04N, 6°52'08W, 1760 m, peak region, grass, moss, etc., 11.VII.2004, leg. Assing (cAss). Castilla y León: 15 exs., Sierra de Ancares, S Puerto de Ancares, 42°51'20N, 6°49'58W, 1850 m, N-slope, grass roots, moss, etc., 13.VII.2004, leg. Assing (cAss); 1 ex., Sierra de Ancares, ENE Puerto de Ancares, peak of Miravalles, 42°52'49N, 6°46'40W, 1960 m, N-slope, grass roots, moss, etc., 15.VII.2004, leg. Assing (cAss).

Comments: The species is rather widespread in the western and central Cordillera Cantábrica and adjacent ranges. Its known distribution is mapped by ASSING (2003a).

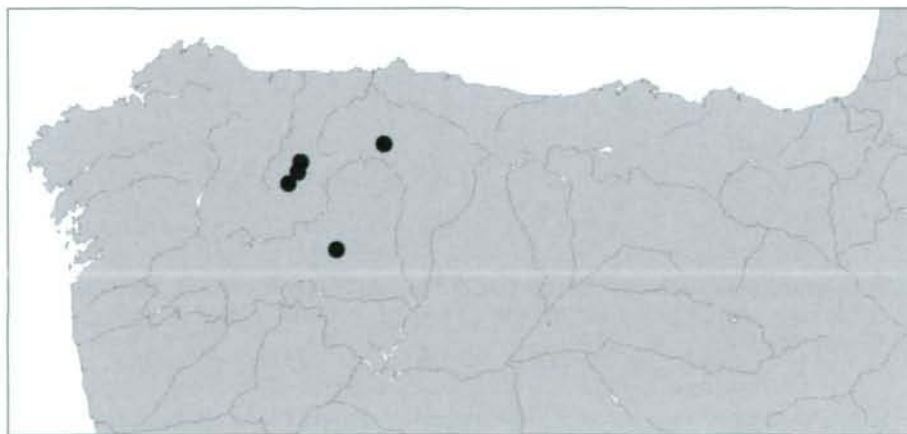
Leptusa (Entomophallopisia) asturiensis* EPPELSHEIM (Map 1)Leptusa asturiensis* EPPELSHEIM 1880: 282 f.*Leptusa (Entomophallopisia) asturiensis caboallensis* PACE 1983: 92; **syn. n.***Leptusa (Entomophallopisia) caboallensis*: PACE 1989: 180; unintentional lectotype designation.

Types examined: *Leptusa asturiensis*: Lectotype ♂: Asturien, Getschman 1379, Reitter / Asturiensis, Eppelsh. Stett. Zeit. 1880, p. 2982 / Typus / vidit R. Pace 1979 (NHMW). *Leptusa caboallensis*: Holotype ♂: Caboalles Paganetti / asturiensis Epp. / det. Bernhauer / ex coll. Scheerpeltz / Holotypus *Leptusa (Micropisia) asturiensis caboallensis* m. det. R. Pace 1980 / *Leptusa asturiensis* Eppelsheim det. V. Assing 2004 (NHMW). Paratype: 1 ♀: same data as holotype (NHMW).

Additional Material examined: Spain, Galicia: 4 exs., Sierra de Ancares, Tres Obisbos, 42°48'04N, 6°52'08W, 1760 m, peak region, grass, moss, etc., 11.VII.2004, leg. Assing (cAss). Castilla y León: 1 ♀, same labels as types of *L. caboallensis*, but "*L. asturiensis* Epp. det. R. Pace 1980" (NHMW) / 2 exs., Sierra de Ancares, ENE Puerto de Ancares, peak of Miravalles, 42°52'49N, 6°46'40W, 1960 m, N-slope, grass roots, moss, etc., 15.VII.2004, leg. Assing (cAss).

Comments: The original description of *L. asturiensis* is based on two syntypes "ein einziges Pärchen" (EPPELSHEIM 1880). In referring to the "holotypus unico", PACE (1989) unintentionally designated the male with his identification labels as the lectotype. An examination of the types of both *L. asturiensis* and *L. caboallensis* and of numerous additional specimens from various localities (see ASSING (2003a) and material listed above) neither yielded any constant morphological differences whatsoever, nor is there any zoogeographic evidence that the populations from Caboalles and those from the other localities should represent distinct species or subspecies. In consequence, *L. caboallensis* is here placed in the synonymy of *L. asturiensis*. Interestingly, one specimen from the type locality of *L. caboallensis* was identified as *L. asturiensis* by Pace himself.

In both Ancares localities, the species was collected together with *L. franzi*; a syntopic occurrence of these two species was also observed by ASSING (2003a). *Leptusa caboallensis* is apparently confined to the western Cordillera Cantábrica, including the Sierra de Teleno (ASSING 2003a). Its known distribution is shown in Map 1.



Map 1: Distribution of *Leptusa asturiensis* EPPELSHEIM in the northern Iberian Peninsula based on examined records.

***Leptusa (Adexiopsis) hummleri* BERNHAUER (Map 2)**

Leptusa hummleri BERNHAUER 1910: 258 f.

Leptusa hummleri advena PACE 1981: 89 f.; **syn. n.**

Material examined: Spain, Galicia: 1 ex., Sierra de Ancares, Tres Obisbos, 42°48'04N, 6°52'58W, 1710 m, *Tetramorium* nest sifted, 11.VII.2004, leg. Assing (cAss); 4 exs., Sierra de Ancares, ENE Degrada, 42°50'12N, 6°54'07W, 970 m, mixed deciduous forest with very old *Castanea sativa*, 14.VII.2004, leg. Assing (cAss); 15 exs., Sierra de Ancares, E Degrada, 42°49'52N, 6°54'25W, 1315 m, old mixed forest with *Ilex*, *Betula*, and *Luzula* undergrowth, 16.VII.2004, leg. Assing (cAss); 1 ex., Sierra do Courel, W Visuña, Formigueiros, 42°36N, 7°07W, 1540 m, montane birch and oak forest with *Luzula* undergrowth, 12.VII.2004, leg. Assing (cAss).

Comments: According to PACE (1981, 1989), *L. hummleri advena*, whose original description is based on a single female from the surroundings of Avilés, is distinguished from the nominal subspecies by the shape of the head, the presence of a median sulcus on the pronotum, and by the shape of the apical cuticular intrusion of the spermathecal capsule. Based on the larger material now available from several additional localities, these characters were found to be variable. A distinction on the subspecific level is not supported by zoogeographic evidence either: the type locality of *L. hummleri advena* is near the coast at lower elevation (Map 2). Consequently, *L. hummleri advena* is here considered a junior synonym of *L. hummleri* BERNHAUER.

It seems worth mentioning that the degree of eye reduction seems to be remarkably variable in this species. In the specimens seen from Puerto del Connio (see ASSING 2003a), the eyes were unpigmented and distinctly smaller, whereas in the other populations they were larger and pigmented.

The species has been found in montane forests (*Betula*, *Ilex*, *Quercus*, *Erica*, *Castanea*, etc.), often with *Luzula* undergrowth and in soils on – or mixed with – layers of rocks or scree. The known distribution of this microphthalmous species is confined to the western Cordillera Cantábrica (Map 2).



Map 2: Distribution of *Leptusa hummleri* BERNHAUER in the northern Iberian Peninsula based on examined records (filled circles); open circle: type locality of *L. hummleri advena* PACE.

***Leptusa (Dysleptusa) sibirica* PACE**

Material examined: Russia: 1♂, Primorskiy Kray, Lasovsky Nat. Res., Kordon Proselochny, 43°01'N, 134°08'E, 4.-6.X.1999, leg. Sundukov (cAss).

Comments: The species was originally described from Vladivostok and later also recorded from the "Réserve d'Etat Soupoutinski" (PACE 1989).

***Leptusa (Dysleptusa) cribripennis* KRAATZ**

Leptusa fuliginosa vavrai ROUBAL 1931: 131; synonymy confirmed.

Types examined: Lectotype ♂: Slov. Hr., Breznica, Roubal / vavrai m. Roubal / type / Lectotypus *Leptusa vavrai* Roubal, Smetana det. 71 / *Leptusa cribripennis* Kraatz det. V. Assing 2004 (SNM). Paralectotype ♀: same data as lectotype (SNM)

Comments: Based on an examination of the previously unavailable types of *L. vavrai* ROUBAL, the recently inferred synonymy with *L. cribripennis* KRAATZ (ASSING 2004) is here confirmed.

***Leptusa (Amalopisalia) veniorum* PACE**

Material examined: Italy: 2♂♂, 1♀, Piemonte, Colle di Tenda, Rocca dell'Abisso, 2200-2400 m, 31.V.2003, leg. Wolf (cSch, cAss).

Comments: This recently described species was previously known only from the type locality ("Colle di Tenda E/ ober [sic] Val Cabainaira, 1900 m"). It is characterised by conspicuous secondary sexual characters not pointed out by PACE (1999). In the male, the posterior margin of the abdominal tergite VIII is strongly concave. In the female, the posterior margin of the abdominal tergite VII is conspicuously pointed.

***Leptusa (Neopisalia) nurdaghensis* ASSING**

Material examined: Turkey, Antakya: 4 exs., 17 km W Antakya, NW Teknepinar, 36°11'07N, 35°59'06E, 400 m, pine forest with oak and shrubs, 3.IV.2004, leg. Assing, Schülke (cAss, cSch); 4 exs., 20 km W Antakya, NW Teknepinar, 36°12'33N, 35°57'30E, 340 m, oak forest, 3.IV.2004, leg. Schülke (cSch).

Comments: Previously, only the holotype of this recently described species was known (ASSING 2003b). The localities listed above are close to the type locality.

***Leptusa taurica* sp.n. (Figs 1-5)**

Holotype ♂: TR - Kahramanmaraş [24], 30 km W Baskonus Yaylasi, 1270 m, 37°33'58N, 36°34'10E, 27.IV.2004, Besuchet / Holotypus ♂ *Leptusa taurica* sp.n. det. V. Assing 2004 (cAss). **Paratype** ♀: same data as holotype (cAss).

Description: 2.0-2.4 mm. Habitus as in Fig. 1. Coloration of body rufous to castaneous, with abdominal segment VI somewhat infusate; legs yellowish brown.

Head weakly transverse, approximately 1.1 times as wide as long; eyes very small, post-ocular region about 4 times as long as eyes in dorsal view; puncturation very fine, barely noticeable; integument with pronounced microreticulation and matt; palpi moderately long. Antennae distinctly incrassate; antennomere IV weakly transverse, X strongly transverse, approximately 3 times as wide as long (Fig. 1).

Pronotum distinctly convex in cross-section, 1.3 times as wide as long and about 1.2

times as wide as head; maximal width in anterior half, distinctly tapering towards base (Fig. 1); puncturation fine and indistinctly granulose; microsculpture as coarse as that of head.

Elytra about as wide as pronotum and at suture approximately 0.7 times as long as pronotum; puncturation with sexual dimorphism, in ♂ strongly, in ♀ weakly granulose; microsculpture weaker than that of head and pronotum. Hind wings absent.

Abdomen dilated posteriad, widest at segment VI; about 1.2 times as wide as elytra; puncturation of tergite III moderately dense and moderately fine, that of remaining tergites very fine and very sparse; microsculpture less coarse than that of head and pronotum, but pronounced and distinctly isodiametric.

♂: tergite VII at posterior margin with minute oblong median tubercle; posterior margin of tergite VIII weakly concave and weakly serrate in the middle; posterior margin of sternite VIII angulate (Fig. 4); median lobe of aedeagus shaped as in Fig. 2, crista apicalis and crista proximalis reduced; internal sac with distinct flagellum, but without strongly sclerotized internal structures; apical lobe of paramere as in Fig. 3.

♀: posterior margin of sternite VIII weakly angulate in the middle; spermatheca as in Fig. 5.

E t y m o l o g y : The name (adj.) refers to the fact that this species is currently the sole endemic representative of the Taurus mountain range.

C o m p a r a t i v e n o t e s a n d s y s t e m a t i c s : The phylogenetic and subgeneric affiliations of *L. taurica* are difficult to assess. In Anatolia, almost all the endemic *Leptusa* species belong to two subgenera, *Neopisalia* SCHEERPELTZ and *Stictopisalia* SCHEERPELTZ. The species of *Neopisalia* have a highly distinctive morphology of the aedeagus and those of *Stictopisalia* are characterised by a pair of distinctly sclerotized structures in the internal sac of the aedeagus. Based on the morphology of its aedeagus, *L. taurica* cannot be attributed to either of these two or to any of the other Western Palearctic subgenera without doubts, which is why a subgeneric assignment is here refrained from.

The new species is readily distinguished from all its congeners by the shape and internal structures of the aedeagus. From the geographically closest congener, *L. nurdaghensis* from Antakya province, it is additionally separated by more distinctly incrassate antennae with more transverse preapical antennomeres, more pronounced microsculpture of the head and pronotum, a more convex (cross-section) and posteriorly more strongly tapering pronotum, shorter elytra with a sexually dimorphic puncturation, and a relatively wider abdomen with more distinct microsculpture.

D i s t r i b u t i o n a n d b i o n o m i c s : *Leptusa taurica* is the second endemic species from southern Anatolia. The type locality is situated to the southwest of Kahramanmaraş. The types were collected by sifting leaf litter near tree trunks in a mixed forest at an altitude of 1270 m.

***Leptusa (Drepanoleptusa) chengduensis* PACE**

M a t e r i a l e x a m i n e d : China: 2♂♂, 2♀♀, Shaanxi, Nanwuteishan, 4.IV.2003, leg. Rougemont (cRou, cAss).

C o m m e n t s : This species was previously known only from Sichuan province (ASSING 2002) and is here recorded from Shaanxi for the first time.

***Leptusa (Aphaireleptusa) xuemontis* PACE (Figs 6-9)**

Material examined: China: 14 exs. [12 brachypterous, 2 macropterous], N-Yunnan, Zhongdian Co., 55 km N Zhongdian, 28°20'N, 99°46'E, 3800 m, primary mixed forest, 18.VIII.2003, leg. Schülke (cSch, cAss).

Comments: According to PACE (2001), *Leptusa yunnanensis* is macropterous and the syntopic *L. xuemontis*, which was described in the same paper and practically from the same locality, is brachypterous. The species here interpreted as *L. xuemontis* is dimorphic. The majority of the specimens indicated above is brachypterous, and two specimens are macropterous. This observation suggests that the types of *L. yunnanensis* and *L. xuemontis* are conspecific and the two names are synonymic. Before formally establishing this synonymy, however, the types should be examined.

As in other species of the subgenus *Aphaireleptusa* PACE, the posterior margin of the male sternite VII is distinctly concave (Fig. 6). The aedeagus (Fig. 7) is very similar to that of *L. chinensis* PACE. The shape of the spermatheca was found to be rather variable (Figs 8-9).

***Leptusa (Akraptopisalia) limata* ASSING (Fig. 10)**

Material examined: China: 1♂, 1♀, Beijing, Dongling mountains, Xiaolongmen, 39°96'N, 115°42'E, 1400 m, under fungoid bark, leg. Cooter (cAss).

Comments: This species was previously known from Shaanxi and Hubei; it is here recorded from Beijing for the first time. There are some differences between the aedeagus of the male from Beijing (Fig. 5) and those of the types: it is somewhat smaller, the ventral process is less curved in lateral view, and the subapical internal structures are of slightly different shape. These differences, however, are apparently an expression of intraspecific variation. No evidence was found in other external characters, in the male secondary sexual characters, and in the shape of the spermatheca, suggesting that the two specimens indicated above should represent a distinct species.

***Leptusa calliceroides* sp.n. (Figs 11-14)**

Holotype ♂: China: N-Yunnan [C03-11], Zhongdian Co., 8 km N Zhongdian, 28°16.6'N, 99°45.7'E, 3220 m, creek valley, devastated primary forest, dead wood, moss, mushrooms, 21.VIII.2003, leg. M. Schülke / Holotypus ♂ *Leptusa calliceroides* sp.n. det. V. Assing 2004 (cAss).

Description: 3.8 mm. Habitus as in Fig. 6. Coloration of body reddish brown, with the apical abdominal segments (from posterior half of segment VII) yellowish brown; legs and antennae rufous; palpi testaceous.

Head approximately as wide as long (in holotype 1.03 times as long as wide); eyes moderately small, postocular region slightly more than 1.5 times as long as eyes in dorsal view; punctures rather dense and relatively large, but shallow; interstices much narrower than diameter of punctures; integument with shallow microreticulation; palpi very long, penultimate joint of maxillary palpi about 4 times as long as wide. Antennae long and slender; antennomeres I-III distinctly oblong and of subequal length, III about 3 times as long as wide, IV weakly oblong and slightly more than half the length of III; V about as wide as long; VI-X of increasing width and increasingly transverse, but X less than 1.5 times as wide as long; XI long and slender, approximately as long as the the combined length of the two preceding antennomeres (Fig. 11).

Pronotum distinctly convex in cross-section, almost 1.2 times as wide as head and approximately 1.25 times as wide as long (Fig. 11); maximal width approximately in the middle; lateral margins distinctly convex in dorsal view; puncturation denser, coarser, and more granulose than that of head.

Elytra about 1.15 times as wide and at suture approximately 1.10 times as long as pronotum; near posterior angles distinctly sinuate; puncturation very dense, coarse, and granulose (Fig. 11). Hind wings reduced. Legs conspicuously long and slender; metatibia about 1.15 times as long as the maximal width of the abdomen; first metatarsomere approximately as long as the combined length of the two following tarsomeres.

Abdomen subparallel and narrower than elytra (Fig. 11); tergites III-VI anteriorly with pronounced transverse impressions; these impressions with dense and coarse puncturation; posterior parts of tergites with finer and sparser punctures; puncturation finer and sparser on posterior than on anterior tergites; posterior margin of tergite VII with palisade fringe.

♂: tergite VII in posterior half with very fine (barely noticeable) and conspicuously straight median carina extending from the middle to the posterior margin of the tergite; posterior margin of tergite VIII moderately convex and with long fine marginal setae, in the middle indistinctly concave; sternite VII unmodified; sternite VIII with distinctly convex posterior margin and with rather dense long thin marginal setae. Aedeagus highly distinctive; median lobe with long ventral process and with conspicuous hook-shaped internal structures (Figs 12-13); apical lobe of paramere long and bent (Fig. 14).

♀: unknown.

E t y m o l o g y : The name (adj.) refers to the morphology of the antennae, which somewhat resemble those of some species of *Callicerus* GRAVENHORST, e. g. *C. rigidicornis* (ERICHSON).

C o m p a r a t i v e n o t e s a n d s y s t e m a t i c s : *Leptusa calliceroides* is readily distinguished from all other Chinese representatives of the genus by its external morphology alone, especially its large and slender body, the rufous coloration, the long antennae, legs, and palpi, and the deep anterior impressions of the abdominal tergites III-VIII; on the whole, the abdomen of this species strikingly resembles that of *Amarochara forticornis* (LACORDAIRE). Since there is no obvious adelphotaxon, the phylogenetic affiliations of this species are somewhat unclear, so that it is not attributed to any of the known subgenera. For a more detailed discussion of the subgeneric assignments of Eastern Palaearctic *Leptusa* species see ASSING (2002).

D i s t r i b u t i o n a n d b i o n o m i c s : The type locality is situated near Zhongdian in northern Yunnan (China), not far from the border to Sichuan. The holotype was sifted from leaf litter of a degraded primary forest at an altitude of about 3200 m.

Acknowledgements

I am most grateful to the colleagues indicated in the material section for the loan of the material which this study is based on. In particular, I would like to thank Michael Schülke for the generous gift of the holotype of *L. calliceroides*.

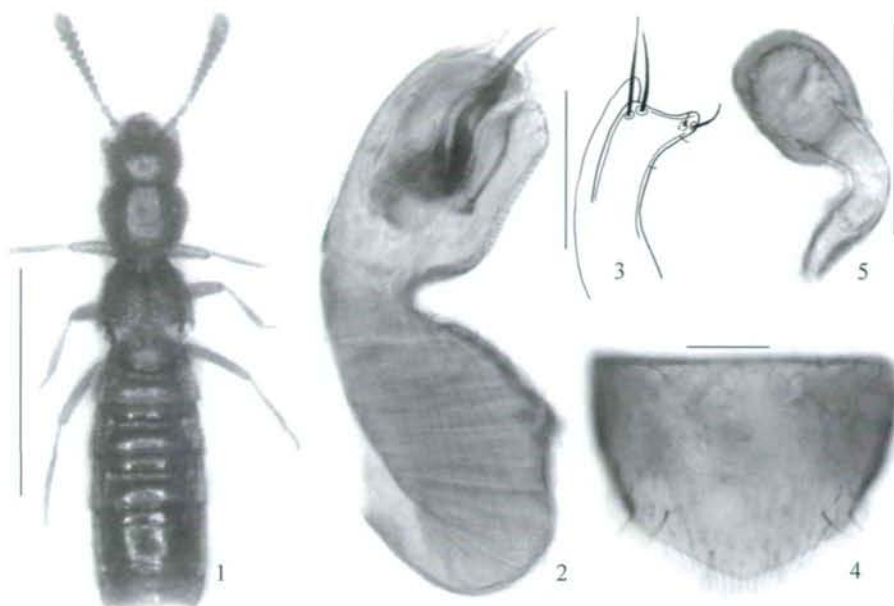
Zusammenfassung

Leptusa taurica sp.n. (Türkei: Kahramanmaraş) und *L. calliceroides* sp.n. (China: N-Yunnan) werden beschrieben und abgebildet. Die folgenden Synonymisierungen werden vorgenommen: *Leptusa asturiensis* EPPELSHEIM = *L. caboallensis* PACE 1983, syn. n.; *L. hummleri* BERNHAUER 1910 = *L. hummleri advena* PACE 1981, syn.n. Nach Untersuchung von Typenmaterial wird die Synonymie von *L. vavrai* ROUBAL 1931 mit *L. cribripennis* KRAATZ 1856 bestätigt. Weitere Nachweise wenig bekannter Arten der paläarktischen Region werden vorgelegt, insbesondere aus Spanien, der Türkei und China. Die derzeit bekannten Verbreitungsgebiete von *L. asturiensis* und *L. hummleri* werden anhand von Verbreitungskarten illustriert.

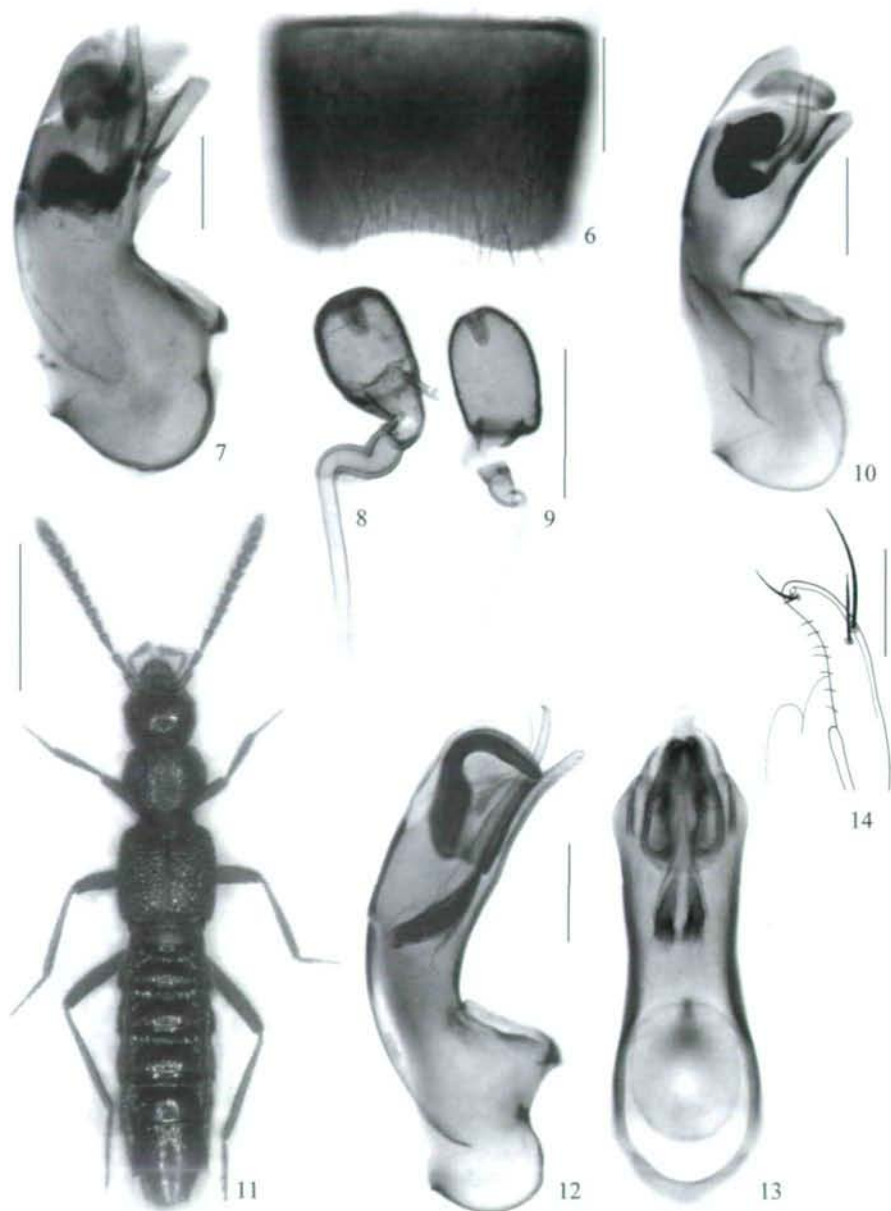
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Figs 1-5: *Leptusa taurica* sp.n.: 1 – facies of paratype; 2 – median lobe of aedeagus in lateral view; 3 – apical lobe of paramere; 4 – ♂ sternite VIII; 5 – spermatheca. Scale bars: 1: 1.0 mm; 2-5: 0.1 mm.



Figs 6-14: *Leptusa xuemontis* PACE (6-9), *L. limata* ASSING (Beijing) (10), and *L. calliceroides* sp.n. (11-14): 6 – ♂ sternite VII; 7, 10, 12 – median lobe of aedeagus in lateral view; 13 – median lobe of aedeagus in ventral view; 8, 9 – spermathecae; 11 – facies; 14 – apical lobe of paramere. Scale bars: 11: 1.0 mm; 6: 0.2 mm; 7-10, 12-14: 0.1 mm.

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